

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A direct-to-press method for preparing a lithographic printing form, the method comprising:

coating a layer of a radiation sensitive ink on a lithographic support having a hydrophilic surface layer to form an ink coating,

imaging the ink coating by digital laser means to form exposed areas and unexposed areas of the ink coating, and

acting on the imaged ink coating with lithographic fountain solution only covered dampening rollers in situ on a printing press to remove the unexposed areas of the ink coating thereby revealing the hydrophilic surface of the support and leaving an oleophilic image formed from the exposed areas of the ink coating,

in which:

the digital laser means emits in the visible or infra-red region of the spectrum;

the ink comprises a radiation absorbing compound;

the radiation absorbing compound is a phthalocyanine pigment; and

the ink additionally comprises an infra-red absorbing dye,

in which the same radiation sensitive ink is used in the coating on the hydrophilic support as is used in the printing.

2. (previously presented) The method of claim 1 in which the digital laser means emits in the infrared region of the spectrum.

3. (cancelled)

4. (As Issued) The method of claim 1 in which the surface of the lithographic support is anodized aluminum, chromium, or a plastic material treated to render it hydrophilic.

5. (previously presented) The method of claim 1 in which the lithographic support is a sleeve or cylinder that fits onto the printing press.

6. (previously presented) The method of claim 1 in which the method is carried out in situ in a printing press.

7. (previously presented) The method of claim 1 in which the ink is sensitive to visible radiation.

8. (previously presented) The method of claim 1 in which the ink is sensitive to infrared radiation.

9. (previously presented) The method of claim 8 in which the digital laser means emits radiation having a wavelength above 600 nm.

10. (As Issued) The method of claim 1 in which the ink comprises a radiation sensitive resin.

11. (As Issued) The method of claim 10 in which the radiation sensitive resin hardens or crosslinks on exposure to radiation.

12. (cancelled)

13. (cancelled)

14. (As Issued) The method of claim 1 in which the ink comprises a polymerization initiator.

15. (As Issued) The method of claim 14 in which the polymerization initiator is photolytically decomposed on exposure to suitable radiation.

16. (As Issued) The method of claim 14 in which the polymerization initiator is thermally decomposed on exposure to suitable radiation.

17. (previously presented) The method of claim 1 in which means are present in an ink-train to coat a predetermined thickness of ink onto the hydrophilic surface.

18. (As Issued) The method of claim 17 in which details of the predetermined thickness are fed directly into a laser imaging head which is programmed to adjust incident power and scanning speed to provide the optimum cure and imaging resolution.

19. (As Issued) The method of claim 17 in which a desired run length is predetermined and the thickness of the ink coated is determined according to the desired run length.

20. (currently amended) A method of printing using the lithographic printing form prepared as described in claim 1 ~~in which the same radiation sensitive ink is used in the coating on the hydrophilic support as is used in the printing.~~

21. (previously presented) The method of claim 20 in which the lithographic support is a sleeve or cylinder that fits on to a printing press, and the method is carried out in situ in a printing press.

22. (As Issued) The method of claim 21 in which the ink comprises a radiation sensitive resin that hardens or crosslinks on exposure to radiation.

23. (As Issued) The method of claim 22 in which the radiation sensitive resin is an acrylate resin.

24. (previously presented) The method of claim 1 in which the infrared-absorbing dye is selected from the group consisting of dyes of the squarylium, cyanine, merocyanine, indolizine, pyrylium, and metal dithiolene classes.

25. (previously presented) A method for printing using a printing form, the method comprising:

coating a layer of a radiation sensitive ink on a lithographic support having a hydrophilic surface layer to form an ink coating,

imaging the ink coating by digital laser means to form exposed areas and unexposed areas of the ink coating,

forming the printing form by removing the unexposed areas of the ink coating with a lithographic fountain solution thereby revealing the hydrophilic surface of the support and leaving an oleophilic image formed from the exposed areas of the ink coating, and

printing using the printing form;
in which:
the digital laser means emits in the visible or infra-red region of the

spectrum;

the same radiation sensitive ink is used in the coating on the hydrophilic support as is used in the printing; and

a desired run length for the printing is predetermined and the thickness of the ink coated is determined according to the desired run length.

26. (As Issued) The method of claim 25 in which the ink comprises a radiation absorbing compound.

27. (As Issued) The method of claim 26 in which the radiation absorbing compound absorbs radiation having a wavelength above 600 nm.

28. (previously presented) The method of claim 25 in which the laser means emits in the infra-red region of the spectrum.

29. (As Issued) The method of claim 28 in which the ink additionally comprises an infra-red absorbing dye.

30. (As Issued) The method of claim 25 or claim 29 in which the lithographic support is a sleeve or cylinder that fits onto a printing press.

31. (As Issued) The method of claim 25 or claim 29 in which the method is carried out in situ in a printing press.

32. (As Issued) The method of claim 31 in which the ink comprises a radiation absorbing compound.

33. (previously presented) The method of claim 31 in which:

the unexposed areas of the ink coating are removed by acting on the support with the lithographic fountain solution covered dampening rollers of the printing press;

the lithographic support is a sleeve or cylinder that fits onto the printing press, and

the printing press comprises an ink-train and means are present in the ink-train to coat a predetermined thickness of ink onto the hydrophilic surface.

34. (As Issued) The method of claim 25 or claim 29 in which the radiation sensitive ink comprises carbon black.

35. (previously presented) The method of claim 25 or claim 29 in which the unexposed areas of the ink coating are removed by acting on the support with the lithographic fountain solution covered dampening rollers of a printing press.

36.-58. (cancelled)

59. (currently amended) A direct-to-press method for printing, comprising:

- a) providing a polymerizable radiation-sensitive composition comprising a resin and a radiation-absorbing material;
- b) applying a coating of the radiation-sensitive composition to a lithographic support having a hydrophilic surface at a predetermined thickness;
- c) imagewise exposing the coating to infrared radiation using an infrared digital laser to produce exposed areas and unexposed areas of the coating; and
- d) on a printing press, acting on the imaged coating with only a lithographic fountain solution to remove the unexposed areas of the coating, thereby revealing the hydrophilic surface of the support and leaving an oleophilic image formed from the exposed areas of the coating.
- e) contacting the oleophilic image with a printing ink; and
- f) imagewise transferring the printing ink from the oleophilic image to a printing substrate, and

wherein the radiation-sensitive composition is the same printing ink as is used in step e).

60. (previously presented) The method of claim 59, wherein steps b) through f) are done on-press.

61. (previously presented) The method of claim 59, wherein steps c) through f) are done on-press.

62. (Cancelled)

63. (previously presented) The method of claim 59, wherein the radiation-sensitive composition is a printing ink.

64. (cancelled)

65. (previously presented) The method of claim 59, further comprising the step of removing the oleophilic image from the lithographic support after a print run has finished.